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# मानक

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IS 10483 (1983): Code for designating perforations of industrial plate sieves (identical with ISO/DIS 7806) [CED 55: Sieves, Sieving and other Sizing Methods]



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IS : 10483 - 1983

*Indian Standard*

CODE FOR DESIGNATING PERFORATIONS  
OF INDUSTRIAL PLATE SIEVES

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INDIAN STANDARDS INSTITUTION  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

# Indian Standard

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# *Indian Standard*

## CODE FOR DESIGNATING PERFORATIONS OF INDUSTRIAL PLATE SIEVES

### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 28 February 1983, after the draft finalized by the Sieves, Sieving and Other Sizing Methods Sectional Committee had been approved by the Civil Engineering Division Council.

**0.2** Industrial sieves made of perforated plates [ *see* IS : 2405 (Part II) - 1980 ]\* are widely used for grading of stones, in the manufacture of cement and sugar and for a variety of other purposes. These are produced in a number of combinations of sizes and shapes of aperture, plate thickness. This Indian Standard gives proper communication guidance between the purchaser and the supplier by codifying the designation of perforated plates irrespective of the material used for manufacturing the perforated plates.

**0.3** In the formulation of this standard due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating to the practices in the field in this country. This Indian Standard is identical with ISO/DIS 7806 'Industrial plate screens — Codification for designating perforations' issued by the International Organization for Standardization (ISO), which is based on the work carried out by the European Association of Manufacturers of Perforated Plate (EUROPERF).

### 1. SCOPE

**1.1** This Indian Standard specifies the code for designating various kinds of perforations and their arrangements in perforated plates. It applies to perforated plate regardless of the plate material.

### 2. TERMINOLOGY

**2.1** For the purpose of this Standard, the definitions given in IS : 5421-1982† and IS : 5742 (Part II) - 1970‡ shall apply.

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\*Specification for industrial sieves: Part II Perforated plates ( *first revision* ).

†Glossary of terms relating to test sieves and test sieving ( *first revision* ).

‡Terms and symbols for sieve bottoms: Part II Perforated plates.

### 3. DESIGNATION

3.1 The perforation of a plate is designated by:

- shape of the holes;
- aperture size  $w$ , or aperture sizes  $w_1$  and  $w_2$  in case of slots;
- mutual arrangements of holes;
- pitch  $p$ , or pitches  $p_1$  and  $p_2$  in case where the pitches are different in directions parallel to the edges of the plate; and
- orientation of the arrangement of the perforation relative to the edges of the plate.

3.2 The codification expresses the items of designation by symbols and magnitudes in the sequence used above.

NOTE — The purchaser should specify the size, thickness and material of the perforated plate for his purpose in addition to the codification.

### 4. CODIFICATION

4.1 **Shape of Holes** — The shape of holes shall be designated by the following symbols (see Fig. 1):

- $R$ : Circular (round)
- $C$ : Square, with sides parallel to the edges of the plate
- $CD$ : Square, with diagonals parallel to the edges of the plate
- $H$ : Hexagonal
- $LR$ : Slots with round ends
- $LC$ : Slots with square ends

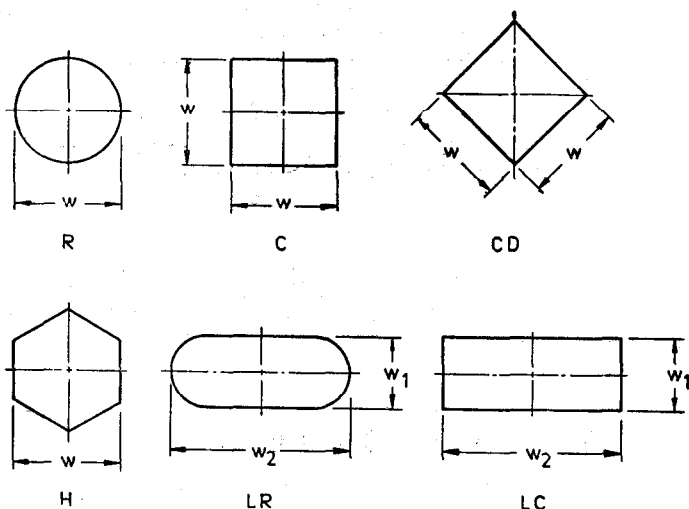


FIG. 1 CODE FOR SHAPE OF HOLES



**4.2 Aperture Size** — Following the symbol for shape of hole, the aperture size shall be stated in millimetres. The width of a slot,  $w_1$ , combined with its length,  $w_2$ , by the sign  $\times$  shall be stated in that order (see Fig. 2).

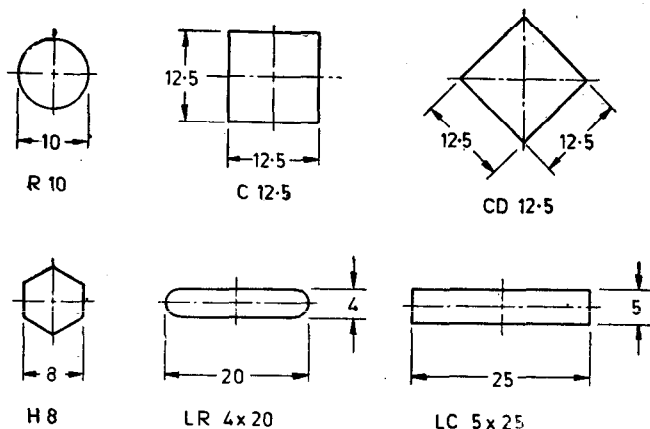


FIG. 2 EXAMPLES OF CODED SHAPE OF HOLE AND APERTURE SIZE

**4.3 Arrangement of Holes** — Following the aperture size, the appropriate symbol for the arrangement of holes shall be stated as given in 4.3.1 to 4.3.4.

**4.3.1** An arrangement of holes with their midpoints at the vertices of rectangles shall be coded U (see Fig. 3).

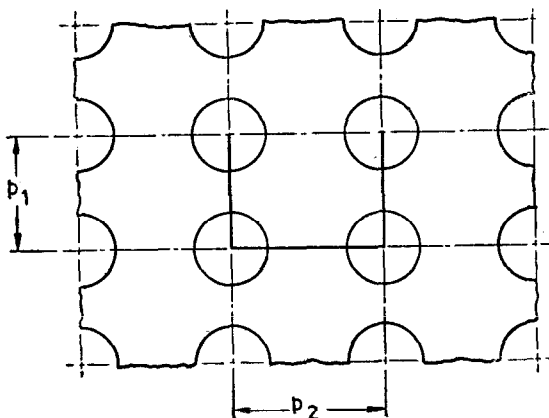


FIG. 3 U-ARRANGEMENT

**4.3.2** An arrangement of holes with their midpoints at the vertices of rectangles and at the intersection of their diagonals shall be coded Z (see Fig. 4 ).

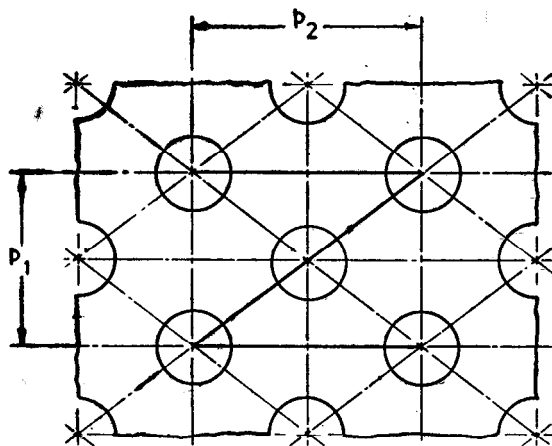


FIG. 4 Z-ARRANGEMENT

**4.3.3** An arrangement of holes with their midpoints at the vertices of squares and at the intersection of their diagonals, when the length of the semi-diagonal is a round number, may be coded M (see Fig. 5 ).

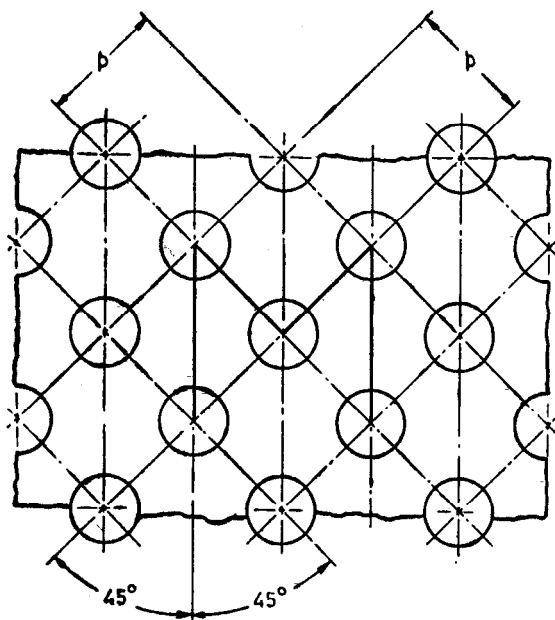


FIG. 5 M-ARRANGEMENT

**4.3.4** An arrangement of holes with their midpoints at the vertices of equilateral triangles shall be coded T (see Fig. 6).

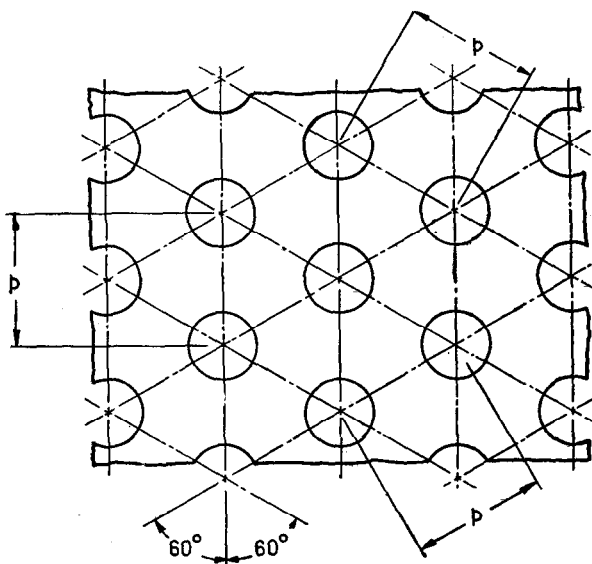


FIG. 6 T-ARRANGEMENT

**4.4 Pitch** — Following the symbol for arrangement of holes, their pitch or pitches shall be stated in millimetres.

**4.4.1** For shapes *R*, *C*, *CD* or *H* in U- or Z-arrangements, both pitches shall be stated, the shorter one,  $p_1$ , first, and combined by the sign  $\times$  (see Fig. 7 and 8). In the case of a U-arrangement, when  $p_1 = p_2$ , only  $p$  shall be stated (see Fig. 9).

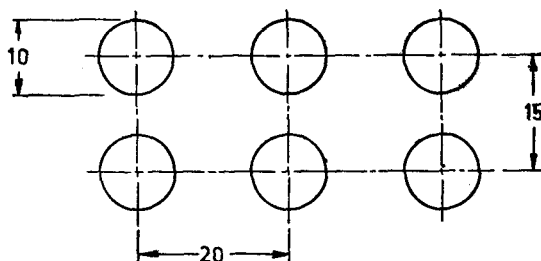


FIG. 7 EXAMPLE OF R10 U15  $\times$  20

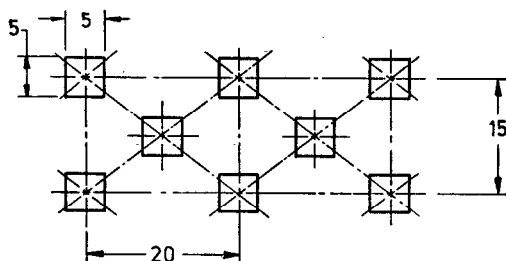


FIG. 8 EXAMPLE OF C5 Z15 × 20

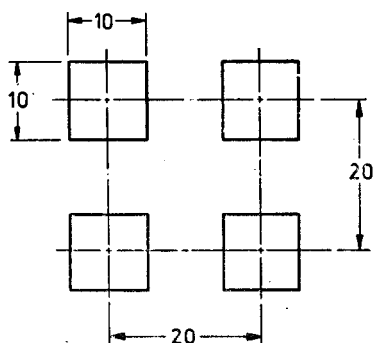


FIG. 9 EXAMPLE OF C10 U20

**4.4.2** For shapes *LR* or *LC* (slots) in U- or Z-arrangements, the pitch parallel to the width of the slots,  $p_1$ , shall be stated first (see Fig. 10 and 11). In the case of a U-arrangement, when  $p_1 = p_2$ , only  $p$  shall be stated (see Fig. 12).

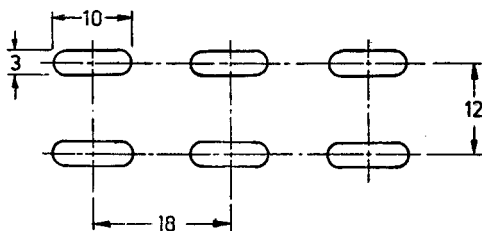
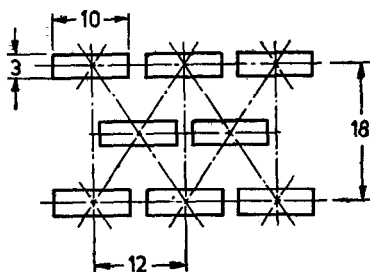
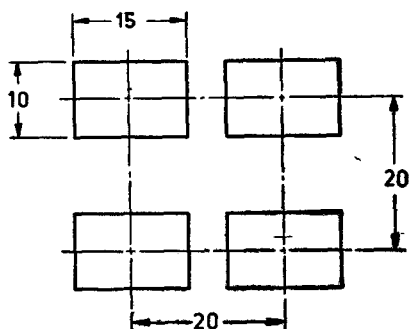


FIG. 10 EXAMPLE OF LR3 × 10 U12 × 18

FIG. 11 EXAMPLE OF LC3  $\times$  10 Z18  $\times$  12FIG. 12 EXAMPLE OF LC10  $\times$  15 U20

4.4.3 For M- or T-arrangements, only  $p$  shall be stated (see Fig. 13 and 14).

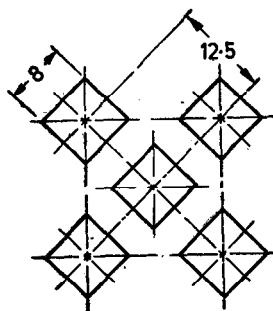


FIG. 13 EXAMPLE OF CD8 M12.5

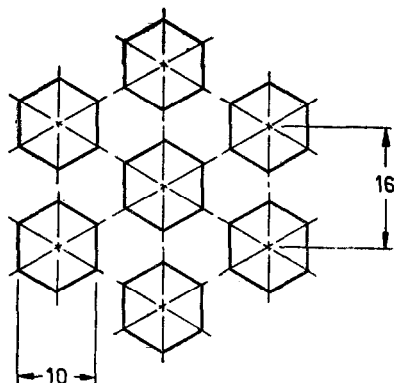


FIG. 14 EXAMPLE OF H10 T16

**4.5 Orientation of the Perforation of the Plate** — There are operating conditions in which the orientation of the perforations with the edges of the plate affects the performance. Choice of orientation is stated as Orientation 1 or Orientation 2 as given in 4.5.1 to 4.5.3.

**4.5.1** With the T-arrangement, Orientation 1 shall be with pitch  $p$  parallel to the longer edge (see Fig. 15); and Orientation 2 shall be with  $p$  parallel to the shorter edge (see Fig. 16).

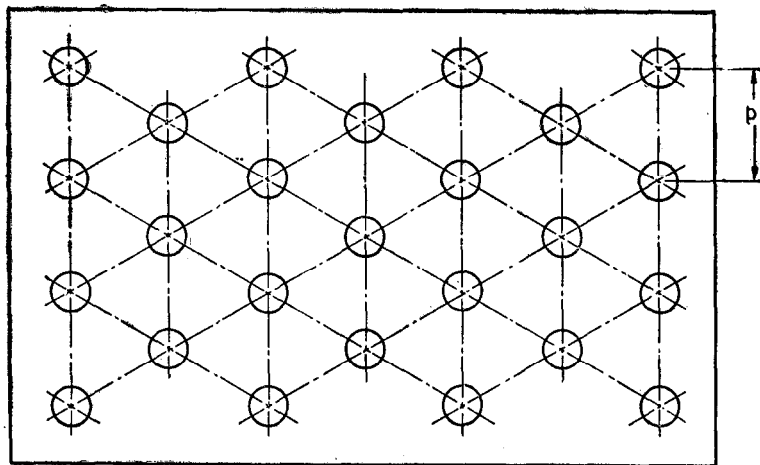


FIG. 15 T-ARRANGEMENT, ORIENTATION 1

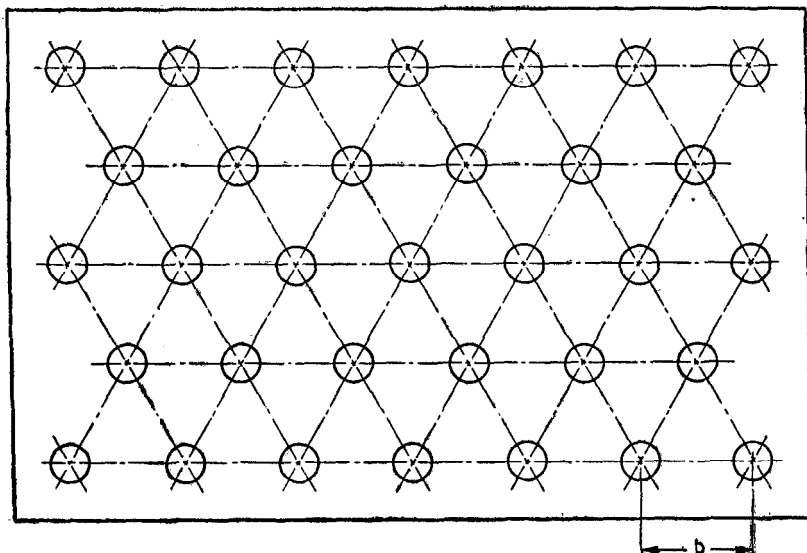


FIG. 16 T-ARRANGEMENT, ORIENTATION 2

**4.5.2** With U- and Z-arrangements, Orientation 1 shall be with the shorter pitch  $p_1$  parallel to the longer edge (see Fig. 17); and Orientation 2 shall be with the shorter pitch parallel to the shorter edge (see Fig. 18).

**4.5.3** With shapes *LR* and *LC* (slots) in U- or Z-arrangements, Orientation 1 shall be with the width  $w_1$  parallel to the longer edge (see Fig. 19); Orientation 2 shall be with the width parallel to the shorter edge (see Fig. 20).

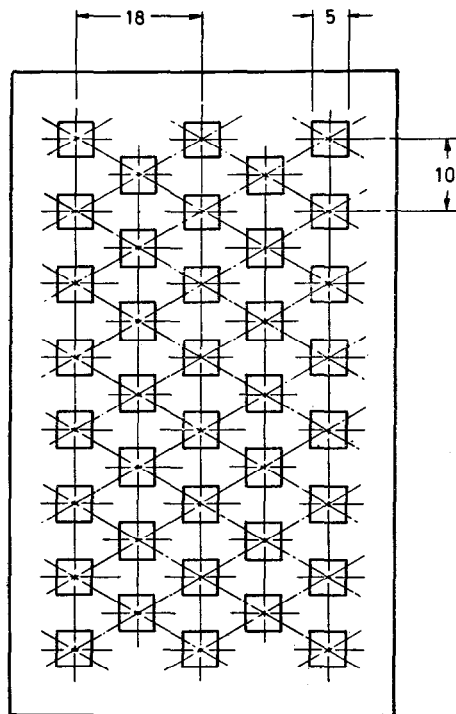


FIG. 17 EXAMPLE OF C5 Z10 x 18 ORIENTATION 1

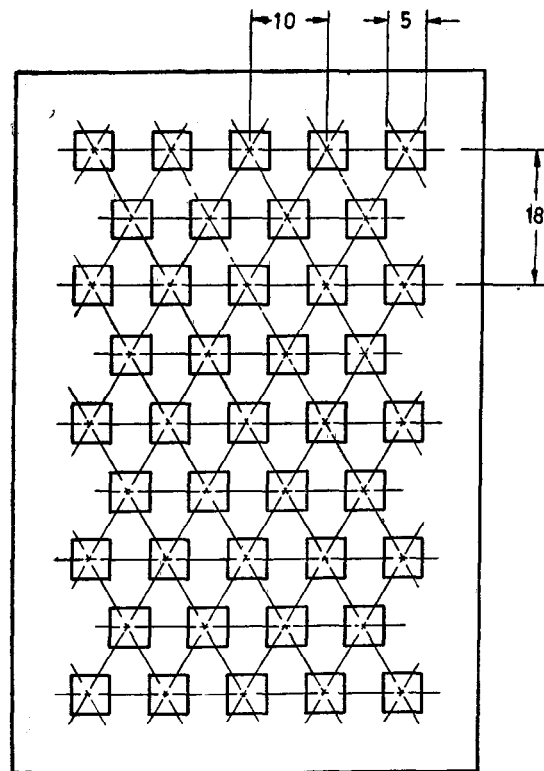


FIG. 18 EXAMPLE OF C5 Z10 x 18 ORIENTATION 2



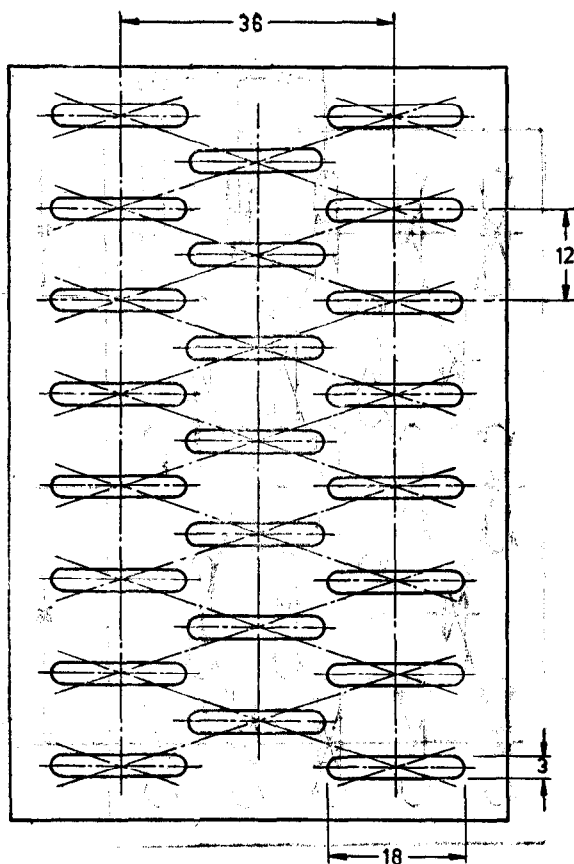


FIG. 19 EXAMPLE OF LR3 X 18 Z12 X 36 ORIENTATION I

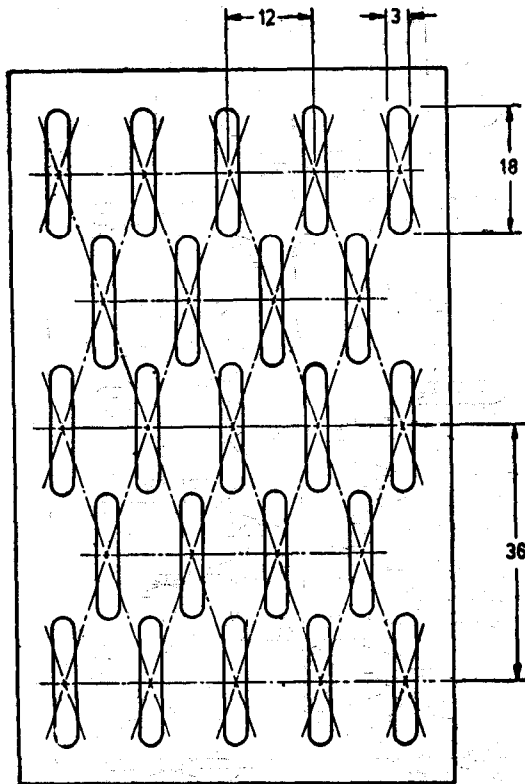


FIG. 20 EXAMPLE OF LR3  $\times$  18 Z12  $\times$  36 ORIENTATION 2